

LDP-CW 20-50

Fully digital cw Driver for High Power Laser Diodes

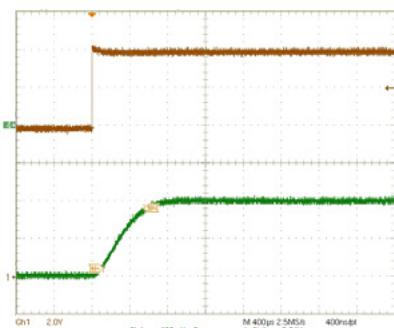


Figure: Soft Start, Current monitor output, scale: 10A/Div

Product Description

The LDP-CW 20-50 is a very affordable, compact and efficient current supply for an output power up to 1 kW.

The capability ranges from continuous output current to analog modulated waveforms like sinusoidal, rectangular or triangular. The modulation is limited usually by the load inductance.

Intended field of application are laser soldering and welding as well as generic surface treatment and show lasers.

The innovative current regulation concept of the LDP-CW 20-50 produces, compared to the commonly used linear regulation concept, considerably less losses. Hence, only one supply voltage is needed for the control logic and the power stage. The current consumption drawn from the power supply only needs to cover the average laser power and is typically much less than 20 A.

- Output current: 1 .. 20 A
- Compliance voltage: 0 .. 50 V
- Output power: 1 kW
- Coverage of cw range
- Analog modulation
- Half brick size (35 cm²)
- Several protective features
- High efficiency

Technical Data*

Output current	1 .. 20 A
Max. compliance voltage	1 .. 50 V
Current ripple	< 1 %
Ripple frequency	> 1 MHz
Current overshoot	Refer to manual**
Analog modulation (10 A _{pp})	Refer to manual**
Current settling time (full-scale)	Refer to manual**
Current setting input	Analog or digital
Supply voltage	12 .. 55 V DC (min. 5 V above laser diode voltage)
Max. power dissipation	< 45 W
Dimensions in mm	60.9 x 57.8 x 29
Weight	Half brick size
Operating temperature	194 g
	0 to +55 °C

* Specifications measured with a fast recovery diode instead of a laser diode.
Technical data is subject to change without further notice.

** Actual values depend on hardware setup

Designed to shield your laser diode from damage, the LDP-CW 20-50 features a number of powerful protective safeguards:

- Innovative current regulation concept actively prevents laser diode from overshoots and overcurrent
- Integrated Soft Start
- Overtemperature shutdown
- Enable/Disable input
- Driver status output
- Protection of the laser diode against reverse currents

Optional Accessories: **LDP-C BOB**
PLB-21